

Available online at www.sciencedirect.com

Procedia Social and Behavioral Sciences 1 (2009) 2637–2641

Procedia
Social and Behavioral Sciences

World Conference on Educational Sciences 2009

The effect of ten weeks individual and group training on the level of depression in female students of Islamic Azad University Ahvaz branch

Gaseminejad Dehkordi. Atousa*

Faculty member of Islamic azad university , ahvaz branch , Iran

Received October 3, 2008; revised December 25, 2008; accepted January 6, 2009

Abstract

Introduction: Depression is an illness that involves the body, mood, and thoughts, that affects the way a person eats and sleeps, the way one feels about oneself, and the way one thinks about things(Ghaseminezhad and et al 2008, Woolery and et al 2004). Studies have shown physical activities improve biological Parameters and mental disorders, depression and tiredness and plays an important role in life (Leforge and et al 1999 , McCartney 1998). The Purpose of this research was to study the effect of ten weeks individual and group training on the level of depression in female students of Islamic azad university Ahvaz branch.

Material and Methods: The method of this investigation is Field-Quasi-experimental . The Beck Depression Inventory in which its reliability and validity was confirmed , was used . The relevant questionnaire was distributed among 450 female students whom enrolled in P.E courses as research population . 75 of subjects showing high depression level according to BDI were randomly divided into three groups of individual and group training and control that these students took part in training protocol consisting of 10 weeks , 2 days a week and 90 minutes a day . Descriptive statistic and t-test , one – way ANOVA and follow up Duncon

test at $\alpha = 0.05$ were used to analyze the data

Results: The results showed that individual and group training significantly decreased that level of depression , but group training was more effective than individual .

Discussion: The present study indicated that different kinds of physical activity have a positive effect on depression symptoms(Ghaseminezhad and et al 2008 , Woolery and et al 2004) . Therefore , it can be suggested that physical activity can be used as a cheap and suitable methods to reduce depression symptoms of female students.

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Keywords: Depression; individual training; group training female student.

* Corresponding author. Tel.: +9809163067321; fax: +98-6114452362

E-mail address: ghaseminezhad_sport@yahoo.com

1. Introduction

Depression is one of the most common mental disorders in the world that has been drawing attention from long ago has extraordinarily spread in the recent decade. This disorder is seen among both men and women but the figure of affliction among women is twice the men (Blehar and oren 1995 and lois1998) that may be attributed to hormonal differences and environmental effects .

The increase in the death toll caused by depression among middle-aged people that usually leads to committing suicide is the tenth leading cause of death of this age group (Comer and Freeman1998) .

However, depression may be prevented and cured. To cure mild to relatively serious cases of depression effective methods such as psychotherapy, anti-depression drugs, electrical shock (EXT) are practiced. However, since these treatments produce undesired side effects, exercise may be used as a substitute method for the treatment of some depressed patients (Paloska and Schwenl 2000 and Choi 1997). Studies have shown physical activities improve biological parameters and amend mental disorders, depression and tiredness and plays an important role in creating an animated and vivid life (Leforge and et al 1999 , McCartney 1998)

Physical activities and sports are regarded as an undeniable necessity in all countries of the world and are practiced in various ways worldwide. These activities include group exercise that are used as practices to acquire physical fitness preparedness. This method of exercise is nowadays taken as a recreational and exciting sport activity that can improve health of human beings. group training, which includes aerobic activities accompanied by music, is an effective to prevent depression, impatience and boredom, and since practitioners perform rhythmic and pre-planned movements it acts as an effective process to modify group behaviors (Masoudi 2007). Innumerable research on this issue show that Aerobics exercises is an inexpensive suitable way to relieve mild to medium depression and prevent it. These exercises let practitioners to overcome tiredness and introduce energy and animation to their activities (Graft , Landers 2000 and Moor , Blumenthal200). Another physical activity that may effectively reduce depression is individual training . individual training is a sport that has not been much discussed in our country. individual training is a way to achieve these internal treasures. It improves our self-confidence, and for this reason this practice may be an important possibility to relieve and prevent certain diseases in the modern world .

Some findings show that individual training affect mental and psychological states, tiredness, depression (woolery and et al 2004 , Murthy 2000). So, I have decided to investigate the effect of these two types of physical activities on the level of depression in female students of Islamic azad university Ahvaz branch

Method

Subjects:

This is a semi-experimental and field research. The statistic population used in this research composed of 450 female students whom enrolled in P.E courses as research population . 75 of subjects showing high depression level according to BDI were randomly divided into three groups of individual and group training and control that these students took part in training protocol consisting of 10 weeks , 2 days a week and 90 minutes a . In order to classify and arrange data a descriptive statistical method was used. Furthermore, in examining hypotheses the inferential statistics, analysis of variance, post hoc Tukey test, dependent t, and Spearman and Pearson correlation coefficients were used. SPSS program was used to analyze data and diagrams were drawn by the Excel software product.

Study design

In this section, hypotheses of the research are put to test by using relevant statistical tests. In order to systematize the topics presented, first I introduce the hypotheses and then related statistical analyses will be reported.

Statistical analysis

Data were analysed using commercial software (spss 12) for calculating dependent t-test to compare mean values of pre-test and post-test results at the level of $\alpha = 0.05$.

Results:

Hypothesis 1: individual training for ten weeks affects on the level of depression in on the level of depression in female students of Islamic azad university Ahvaz branch

According to the information provided in table 1 and diagram (chart) 1, and by using dependent t-test to compare mean values of pre-test and post-test results at the level of $\alpha = 0.05$ it was understood that the calculated t, on the condition of the equivalence of variances, is 8.03 and this value of t is meaningful if $P \leq 0.001$. It is concluded that individual training have been able to reduce depression female students of Islamic azad university Ahvaz branch in a meaningful way.

Table 1: compares depression among female students before and after individual Training.

individual training	N	mean	MD	t calculated	d	level of meaningful
pre test	20	15.5	3.05	8.03	19	0.001
Post test	20	8.45	3.18			

Hypothesis 2: group training for ten weeks affects on the level of depression in on the level of depression in female students of Islamic azad university Ahvaz branch

Based on the information provided in table 2 and diagram(chart) 2and with respect to the dependent t-test to compare mean values of pre-test and post-test results at the level of $\alpha = 0.05$ it was understood that the calculated t, on the condition of the equivalence of variances, is 18.16 and this value of t is meaningful if $P \leq 0.001$. The conclusion is that It is concluded that individual training have been able to reduce depression female students of Islamic azad university Ahvaz branch in a meaningful way.

Table 2: compares depression among female students before and after group Training.

group Training	N	mean	MD	t calculated	d	level of meaningful
pre test	20	15.5	3.10	18.16	19	0.001
Post test	20	6.45	2.45			

Hypothesis 3: There is difference between depression in control group on the level of depression in female students of Islamic azad university Ahvaz branch

According to the information provided in table 3 and diagram (chart) 3, and by using dependent t-test to compare mean values of pre-test and post-test results at the level of $\alpha = 0.05$ it was known that the calculated t, on the condition of the equivalence of variances, is 1.19 and this value of t is meaningful if $P \leq 0.05$. Therefore, we can conclude that depression in the control group has meaningfully increased.

Table 3: draws a comparison of depression among members of the control group.

control	N	mean	MD	t calculated	d	level of meaningful
pre test	20	13.5	3.05	1.19	19	0.05
Post test	20	15.15	5.26			

Hypothesis 4 There is difference in the level of depression between individual training and group training for ten weeks affects on the level of depression in on the level of depression in female students of Islamic azad university Ahvaz branch

Table 4 shows results of the tests concerning the first, second and third hypotheses. Regarding the table, the calculated F is 86/22 that is meaningful when $P \leq 0.001$. In order to draw a distinction between different groups the Tukey test has been used.

Table 4: results analysis of variance

	Sum of squares	df	Mean of squares	F	P
Between group	1486/23	2	628/21	86/22	0/0001
Within-group	668/050	57	8/220		
total	2158/28	59			

Table 5 draws a comparison between the difference of the mean value of the pre-tests and post-tests made in the test groups from the standpoint of the degree of depression. The Tukey method has been used in this comparison.

Table 5: draws a comparison between the difference of the mean value of the pre-tests and post-tests

individual Training	group training	control	groups	mean
*	*	-	individual Training	8.45
*	-	*	group training	6.45
-	*	*	control	15/15

Regarding the information provided in table 5, it is observed that the mean values of the groups in the research are meaningfully different. Therefore, it can be inferred that practicing Yoga and aerobics for eight years affects depression among non-athlete women above 40.

In order to illustrate the mean values of the three groups in pre-tests and post-tests more clearly please see diagram(chart)4. Individual training for ten weeks causes a meaningful reduction in depression. Results of the research: group training for ten weeks causes a meaningful reduction in depression. Depression in the control group consisting on the level of depression in female students of Islamic azad university Ahvaz branch shows a difference. Findings show group training are more effective in relieving depression as compared to individual practices

Discussion

Results of this research is in correspondence with many other researches conducted by Martison (1995), Moore et al. (2000), Lampinen, Rupila and Hikinin (2000), Kal (2000), Paloska et al. (2000), Thomson et al. (2003), Yousefi (1991), Mohammadinezhad (1992), Hashemi (1995), Kashtidar (1995), Mehdi-pour (1997), Rahmani (1997), researches at the Shahruod Faculty of Medical Science (1998), Hatami Milajerdi (1998), researches at the Shiraz University of Medical Science (1999), Fash (2000), Poshtiban (2001) and Mohammadi Manizani (2002) , Ghaseminezhad Dehkordi and Noorbakhsh (2008). This effect probably resides in the increase in androphines of the subjects of the research that has been proved to increase as the result of sport activities and may liven up and animate persons by affecting their central nervous system. On the other hand, sport activities may improve self-confidence in persons, a quality that seems to be seriously absent in people suffering from depression The relation between sport activities and depression has been investigated especially in the last decade. This research also confirms that sports may be a good therapy to change the mood of depressed people and play a very important and inexpensive role, without any side effect, in curing depressing or preventing it. Therefore, since findings of this

research are in agreement with findings of many other researchers it can be concluded that physical activities play an important role in facilitating treatment and palliating depression, and people are advised to care physical activities as a means to prevent depression among women and other individuals.

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